

User Guide for ASTER Data Acquisition Requests (DAR) Tool

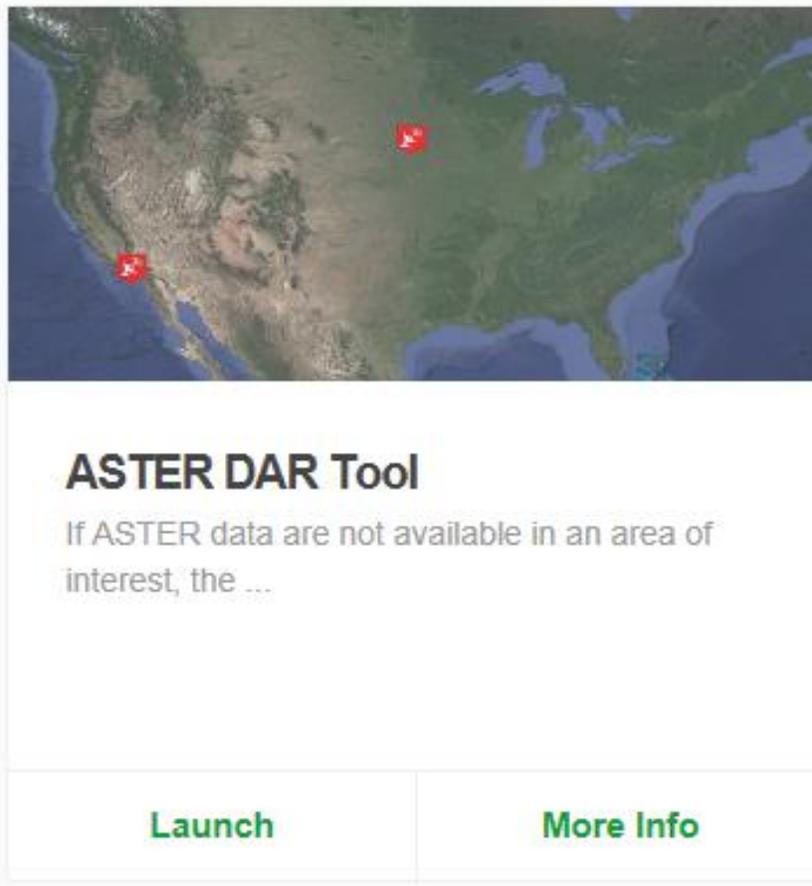
The Advanced Spaceborne Thermal Emissions and Reflection Radiometer (ASTER) DAR Tool is a web resource used to make tasking requests of the ASTER sensor for gathering data from areas specified by an authorized user. Additional details are available from the [ASTER JPL Web site](#).

Note: Only the Visible Near Infrared (VNIR) and Thermal Infrared (TIR) telescopes can be tasked. The Shortwave Infrared (SWIR) detector is no longer functioning due to anomalously high SWIR detector temperatures. Refer to [ASTER SWIR User Advisory Document](#) for more details.

The following user guide is intended to aid users in effectively making their tasking requests.

ASTER DAR Tool:

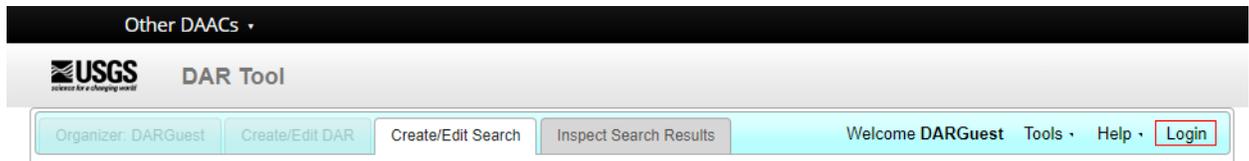
1. Go to the ASTER DAR Tool page (<https://dartool.cr.usgs.gov/Main.php>), click the “Launch ASTER DAR Tool” link.
2. OR “More Info” should you need details about this tool.



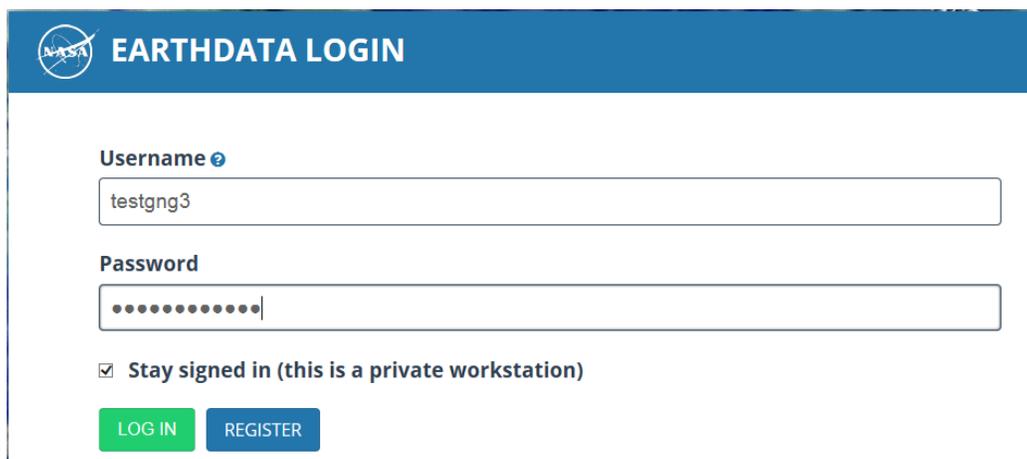
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Log on to the ASTER DAR Tool:

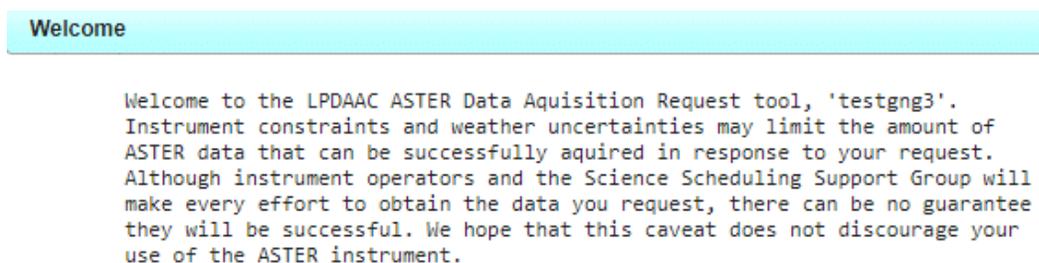
1. If you have not logged in, you will be default to a guest user, **DARGuest**. Select the Login menu item to start the login process.



2. The system will be directed to Earthdata for authentication of your credentials. Enter your username and password, then press on the enter key or click the Login button.

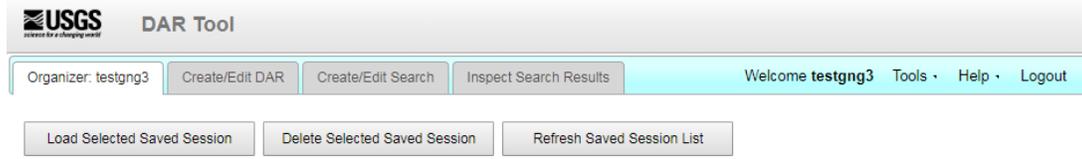


3. You will then be redirected to the DAR Tool application. If you are an authorized DAR Tool user, you will see a successful login message and your username will appear in the Welcome section of the app.

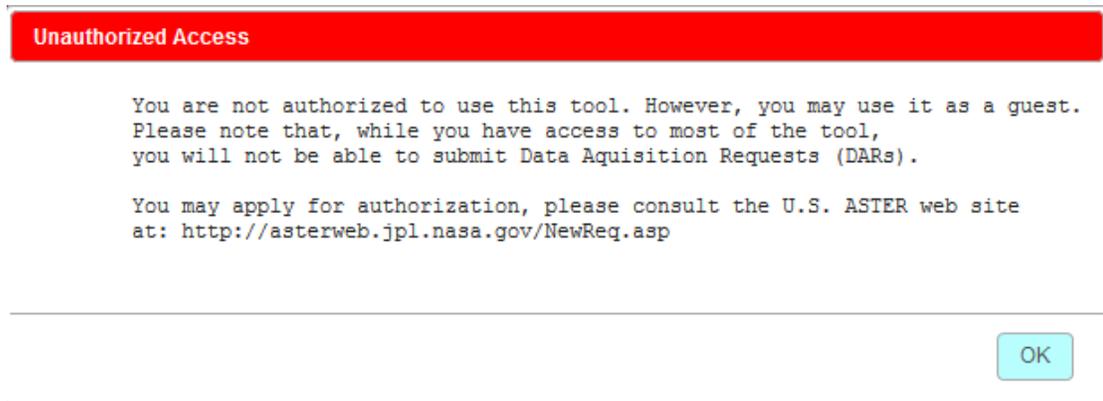


4. The Organizer tab and the Welcome located on the tool bar will identify the authorized User ID.

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5. If your Earthdata user is not authorized to use DAR Tool, you'll receive an error message with instructions on how to apply.



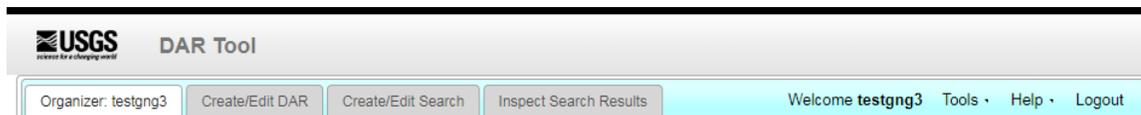
DAR Tool Tabs:

The corresponding tabs will allow a user to switch to other sections displaying available options. DARGuest will not see the Tools tab.

Tools – Request Remaining Budget and Overpass Predictor are available for authorized users

Help – Disable Tooltips (i), User Guide, JPL ASTER Web Link

Logout - To sign out of one's account



Organizer

For Authorized users By default, the Organizer tab will load after you log in, enabling retrieval of previously saved DARs, searches, and search results.

Create/Edit DAR

General Tab:

1. Click on the "Create/Edit DAR" tab. Creating a DAR requires moving through the tabs associated with the Create/Edit DAR tab. Begin with the General tab and work your way to the right
2. Complete the appropriate fields. Entries in red text (marked with an asterisk) are required. The "Reset" button can reset all values or just the tab currently displayed.

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The screenshot shows the USGS DAR Tool interface. At the top, there is a navigation bar with the USGS logo and the text "DAR Tool". Below this, there are tabs for "Organizer: testgng3", "Create/Edit DAR", "Create/Edit Search", and "Inspect Search Results". A user greeting "Welcome testgng3" and links for "Tools", "Help", and "Logout" are also present. The main content area has several tabs: "General", "Spatial", "Temporal", "Coverage", "Geometry", "Priority", and "DAR Summary". The "General" tab is active, showing a form with the following fields and options:

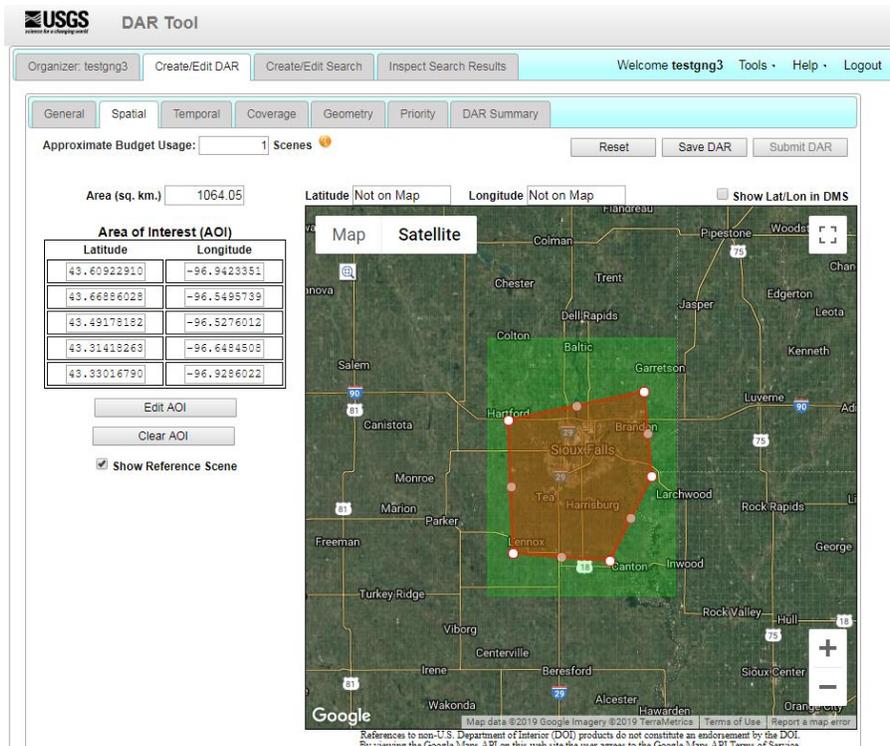
- Approximate Budget Usage: 0 Scenes (with a help icon)
- Buttons: Reset, Save DAR, Submit DAR
- DAR ID: (empty text input)
- * DAR Title: User Guide (22 characters remaining)
- User ID: testgng3
- Science Classification: Other (dropdown menu)
- * Science Objective: Testing (25 characters remaining)
- Avoid Clouds Flag: Yes (selected), No
- Maximum Cloud Coverage (%): <= 20 (dropdown menu, with a note: "Users may only increase this value after DAR submission")
- Day/Night Settings: Day (dropdown menu)
- Telescope Settings: Full Mode (dropdown menu)
- Show Gain Settings: (checkbox, currently unchecked)

A red box highlights the "Show Gain Settings" checkbox, with an arrow pointing to a text note: "Show Gain Settings - this field is recommended for expert users only as invalid entries can result in failed data acquisition requests."

Spatial tab:

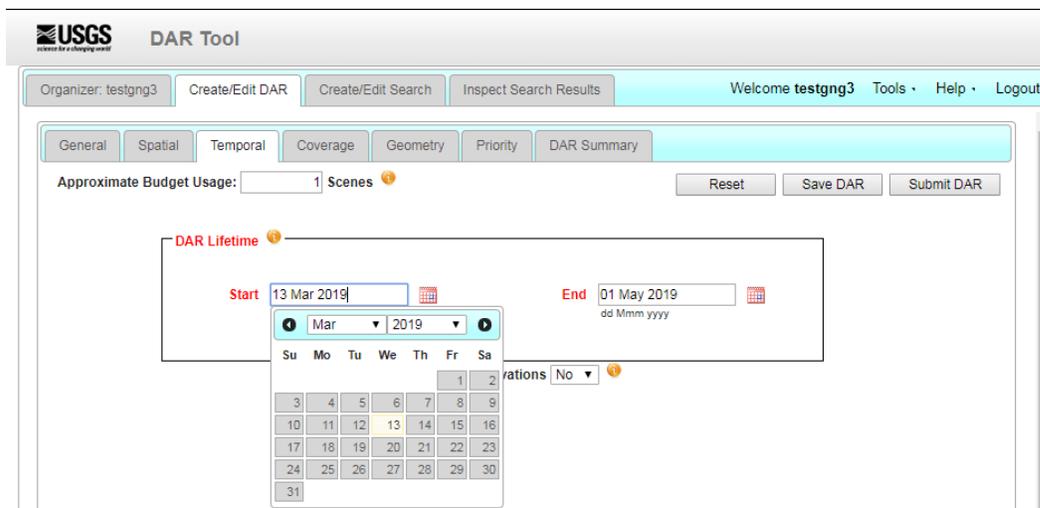
1. The (AOI) points on the map use a clockwise manner to set the limits of the area. GDS Japan will not accept areas with points in a counter clockwise order. There are Two available options to enter your AOI points:
 - a. Using the draw icon, the bounding area is set by double clicking the last point entered. To adjust these points, place the mouse over the dot, click and hold to move the point. To reset the last dot you moved, click the arrow icon.
 - b. Create AOI: Enter Latitude/Longitude pairs separated by a comma with each pair on a separate line
2. The "Approximate Budget Usage" tool provides the number of scenes used in the currently displayed DAR request.
3. The green reference box is equivalent to one scene (60 km x 60 km); this can be toggled on and off using the checkbox to the left of the map labeled "Show Reference Scene". The area shaded in red, within the polygon points represents the selected area of your DAR request.

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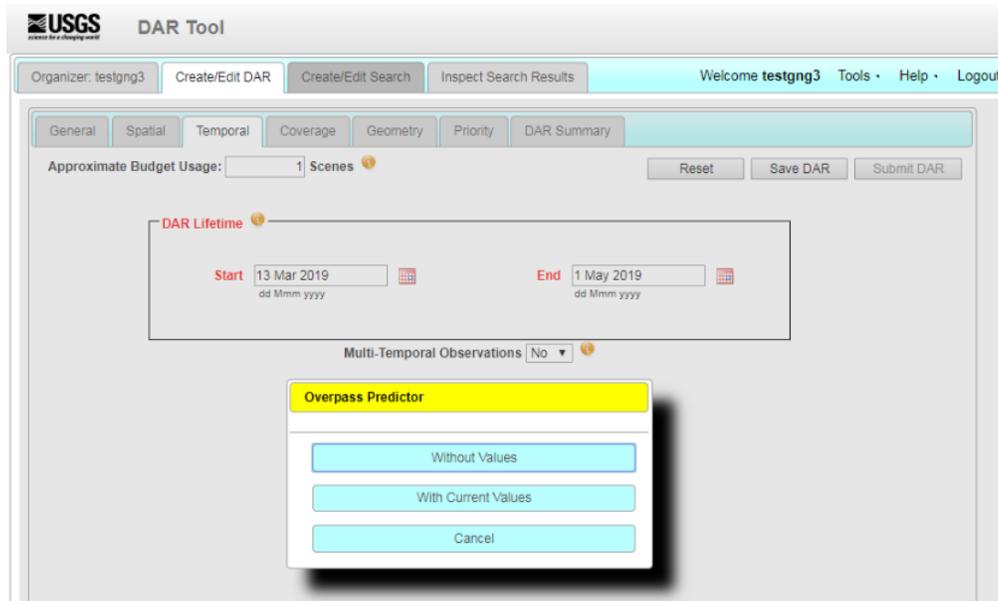
Temporal tab:

1. In the DAR Lifetime, set the dates for your acquisition request, using the calendar tool.



2. Click on the “Overpass predictor” link, located under the “Tools” section of the “[ASTER DAR Tool](#)”, to obtain an estimate of the next opportunity for ASTER to acquire data. You will have the option to choose “Without Values or With Current Values” (For Full Mode (VNIR, *SWIR, TIR), require "Peak Elev" 81.5 °) of the area of interest (Latitude/Longitude) you entered. *Please refer to the change in status alert for the ASTER SWIR detector (see reference link below).

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Multi-Temporal Observations:

1. The default settings for “Multi-Temporal Observations is “No”.
2. If you want to have multiple Acquisition Windows over the Dar lifetime, set this flag to “Yes”. A Multi-Temporal Observation is one where the GDS Japan Scheduler attempts to completely observe the target once in *each* Acquisition Window.
3. Click on the “Overpass predictor” link, located under the “Tools” section of the “ASTER DAR Tool”, to obtain an estimate of the next opportunity for ASTER to acquire data.
4. Set the “Repeat Interval” (minimum effective value = 16 days) and the “Acquisition window” (This is the length of time you desire each subsequent request to last). Note: If you have the show timeline checkbox checked, you will see a pictorial representation of your acquisition windows and repeat intervals. Hold the mouse over the different sections within the bar will show the dates of that acquisition window.

Coverage tab:

1. This tab allows:
 - a. Cross-Track Fragmentation – The default value of “Yes” allows fragmentation in the cross-track direction and provides a higher probability for the AOI being observed. Changing the value to “No” requires that the AOI be observed with a single observation. Note: The Allow Cross-Track Fragmentation feature applies to AOIs of less than 60 kilometers wide (i.e., the width of one ASTER scene).
 - b. Along-Track Fragmentation – The default value of “No” allows the observation to include the entire length of the AOI in the Along-Track direction; thus, minimizing any fragmentation during data acquisition.
 - c. Coverage Method – The default value of “Normal” allows for 100% observation of the AOI. Use of the Normal setting is strongly recommended. Changing the value to Sample requires the user to provide additional information to control the sampling pattern.

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USGS
ASTER Data Acquisition Requests (DAR) Tool

Organizer: testgng3 Create/Edit DAR Create/Edit Search Inspect Search Results Welcome testgng3 Tools · Help · Logout

General Spatial Temporal Coverage Geometry Priority DAR Summary

Approximate Budget Usage: Scenes ⓘ Reset Save DAR Submit DAR

Allow Cross-Track Fragmentation: Yes No ⓘ

Allow Along-Track Fragmentation: Yes No ⓘ

Coverage Method: Normal Sampled ⓘ

GDS Japan will only accept expert calculated values in this field.

Geometry tab:

1. Default values are set for the Telescope Look Angle and Acceptable Sun Angle settings. Using the Advanced settings is NOT recommended for users without a thorough understanding of the ASTER instrument.

Overriding the default values in the Geometry tab:

1. To override the default values, check the “Advanced” checkbox. Respond to the fields for each radio button accordingly.

USGS
ASTER Data Acquisition Requests (DAR) Tool

Organizer: testgng3 Create/Edit DAR Create/Edit Search Inspect Search Results Welcome testgng3 Tools · Help · Logout

General Spatial Temporal Coverage Geometry Priority DAR Summary

Approximate Budget Usage: Scenes ⓘ Reset Save DAR Submit DAR

Telescope Look Angle ⓘ

Any Angle

Advanced

Advanced option is recommended for expert use only.

Range is -8.55 to +8.55
+ is satellite Left
- is satellite Right

Acceptable Sun Angle ⓘ

Any Angle

Advanced

Click on the icon for additional information.

Range is 0 to 90
Zenith = 90 degrees

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Priority tab:

1. The default is set to “Normal”. When the acquisition of your data is critical (e.g. emergency response to natural hazard/human disaster) users may assign the Acquisition Urgency as urgent. The budget tool will indicate how many scenes will attempt to be acquired.

The screenshot shows the USGS DAR Tool interface. At the top, there is a header with the USGS logo and the text "DAR Tool". Below the header, there is a navigation bar with tabs: "Organizer: testgng3", "Create/Edit DAR", "Create/Edit Search", and "Inspect Search Results". To the right of the navigation bar, there is a user greeting "Welcome testgng3" and links for "Tools", "Help", and "Logout". Below the navigation bar, there is a sub-navigation bar with tabs: "General", "Spatial", "Temporal", "Coverage", "Geometry", "Priority", and "DAR Summary". The "Priority" tab is currently selected. In the main content area, there is a section for "Approximate Budget Usage" with a text input field containing the number "3" and a "Scenes" label. To the right of this input are "Reset", "Save DAR", and "Submit DAR" buttons. Below this, there is a section for "Acquisition Urgency" with two radio buttons: "Normal" and "Urgent". The "Urgent" radio button is selected. A red warning message is displayed below the radio buttons: "Warning: An 'Urgent' acquisition uses three (3) times more budget than a 'Normal' acquisition". Below the warning is a "Requester Comments" section with a large text area and a "255 characters remaining" label. At the bottom, there is a section for "Request for Expedited Data" with two radio buttons: "Yes" and "No". To the right of these radio buttons is a note: "Only pre-authorized users can request Expedited data. Expedited buttons are not viewable to all users."

2. Authorized users can request expedited data. This puts an increase priority on delivery of the acquired scene(s).

DAR Summary tab:

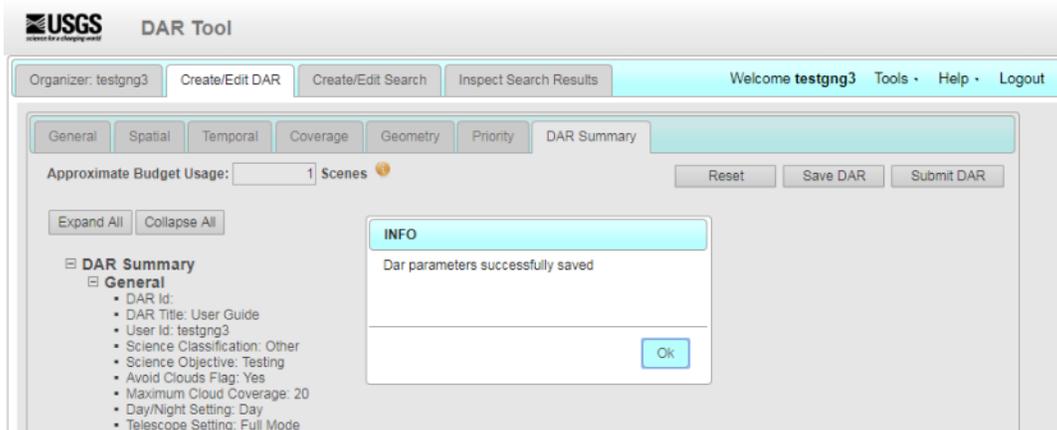
The DAR Summary tab is used to review the settings you have entered for your DAR.

1. Click the “Expand All” to view the various folders to review the data related to your DAR.
2. The Reset button will allow the user to reset to the defaults, the currently selected tab or the entire DAR criteria.
3. When you are satisfied the information is correct, move on to saving and submitting the DAR.

Saving and Submitting DAR:

1. Click the “Save DAR” button. This will save your DAR parameters.
2. To close the window, click the OK button. (Your saved DAR will now appear under the Organizer tab should you wish to review). The DAR must be saved prior to submitting.

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3. Click the “Submit DAR” button. You will receive an email with a DAR ID to identify your DAR and will be saved under the “Organizer” tab. If there is an error, you will be given the error code. Contact [LP DAAC User Services](#) for information about the error code.

Modify/Copy DAR

Under the Create/Edit tab authorized users have the option to Modify DAR and Copy DAR.

Modify DAR:

Only Two parameters can be modified once you submit a DAR.

1. The maximum cloud coverage field can only be made less restrictive (i.e. increase from 10% to a larger value).
2. Suspend/Activate DAR – Allows users to suspend or activate a submitted DAR once they have submitted it. If an acquisition has failed or partially failed, that budget for those failed acquisitions will be credited in approximately 41 days **after** the DAR lifetime has expired. To suspend a DAR, please contact [LP DAAC User Services](#).

Copy DAR:

Create a DAR using previously submitted criteria.

3. Locate the DAR from the “Organizer” tab that has a DAR ID associated with it.
4. Click on the circle next to that DAR and then click on “Load Selected Saved Session”. The DAR Tool will load the selected DAR information.
5. Click on “Copy DAR”.
6. Use the (General, Spatial, Temporal, Coverage, Geometry, Priority, and DAR Summary) tabs to update and make any changes to your DAR parameters.
7. When you have updated all the relevant fields, click the “Save DAR” button. A dialog box will advise the DAR parameters successfully saved. Click “OK” to close window.
8. If you are satisfied with the changes, click the “Submit DAR” button. Your submitted DAR will be sent to GDS Japan for scheduling of your DAR. A DAR ID will identify your DAR located under the “Organizer” tab. (If an error occurs, a dialog window with an error code will be provided. For information about the error code contact [LP DAAC User Services](#))

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Searching for Acquired DARs

Create/Edit Search

The Create/Edit search does not require that all fields from all tabs be filled out (e.g. DAR ID and xAR Title) related to specific DARs. This functionality is also available for users signed in as a GUEST. Acquired ASTER data searches may be located by completing the Spatial and Temporal tabs.

1. Click on the Create/Edit Search tab.

General tab:

1. If you know the specific DAR ID(s) you are looking for, you can fill out the General tab. Enter the ID in the “Search by DAR ID Field” (e.g. 121425). If multiple IDs need to be searched, enter the IDs you want to search by separated with commas.
2. If you do not know the specific DAR ID, you can search the Area of Interest (AOI) using the spatial tab.

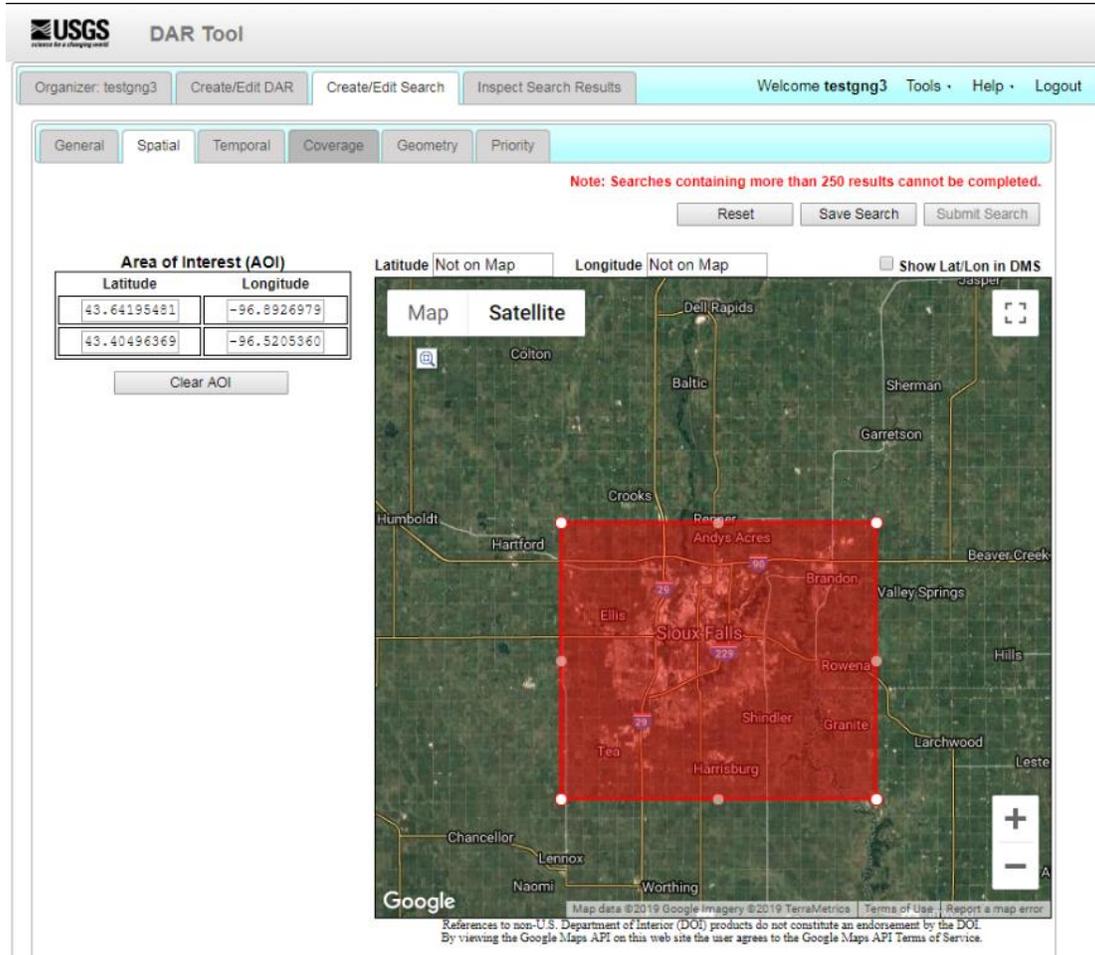
The screenshot shows the USGS DAR Tool interface. At the top, there is a navigation bar with the USGS logo and the text 'DAR Tool'. Below this, there are several tabs: 'Organizer: testgng3', 'Create/Edit DAR', 'Create/Edit Search' (which is highlighted), and 'Inspect Search Results'. To the right of these tabs, it says 'Welcome testgng3' followed by 'Tools', 'Help', and 'Logout'. Below the navigation bar, there are several sub-tabs: 'General', 'Spatial', 'Temporal', 'Coverage', 'Geometry', and 'Priority'. The 'General' tab is selected. In the 'General' tab, there is a search field labeled 'Search by DAR ID' with a magnifying glass icon next to it. Below this field, there is a note: 'Enter DAR ID and click on the icon to begin search.' To the right of the search field, there are three buttons: 'Reset', 'Save Search', and 'Submit Search'. Below the search field, there is a section titled 'New Search' with several filters: 'xAR Status' (Any), 'xAR Type' (Any), 'xAR Title' (Exact match required if entered), 'xAR User ID', 'Science Classification' (Any), 'Maximum Cloud Coverage (%)' (>= 5 and <= 100), 'Day/Night Settings' (Any), and 'Telescope Settings' (Any). A red note at the top right of the search area says: 'Note: Searches containing more than 250 results cannot be completed.'

Spatial tab:

1. Locate your AOI by first clicking the globe to reposition it over your area.
2. Use the Zoom in – Zoom out scale along the left side of the map or click on the pan arrows to maneuver to your AOI.
3. Click on the “Draw a rectangle” box in the middle of the map. Click and drag a box on the map to identify your AOI. You can adjust the corner point of the AOI if you click and hold the corner point you want to adjust. Your AOI will populate in the latitude and longitude

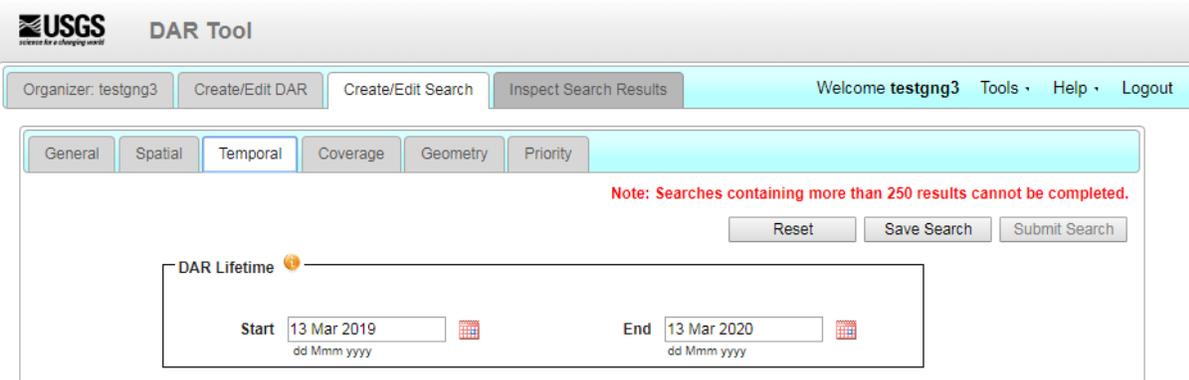
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boxes on the left-hand side of the screen. If you do not like the area selected, use the Clear AOI button to clear the map and enter another location. If you know the approximate Latitude and Longitude for your AOI, use the Latitude and Longitude boxes at the top of the window to guide your selection.



Temporal tab:

1. Enter the time window for your dates of interest.



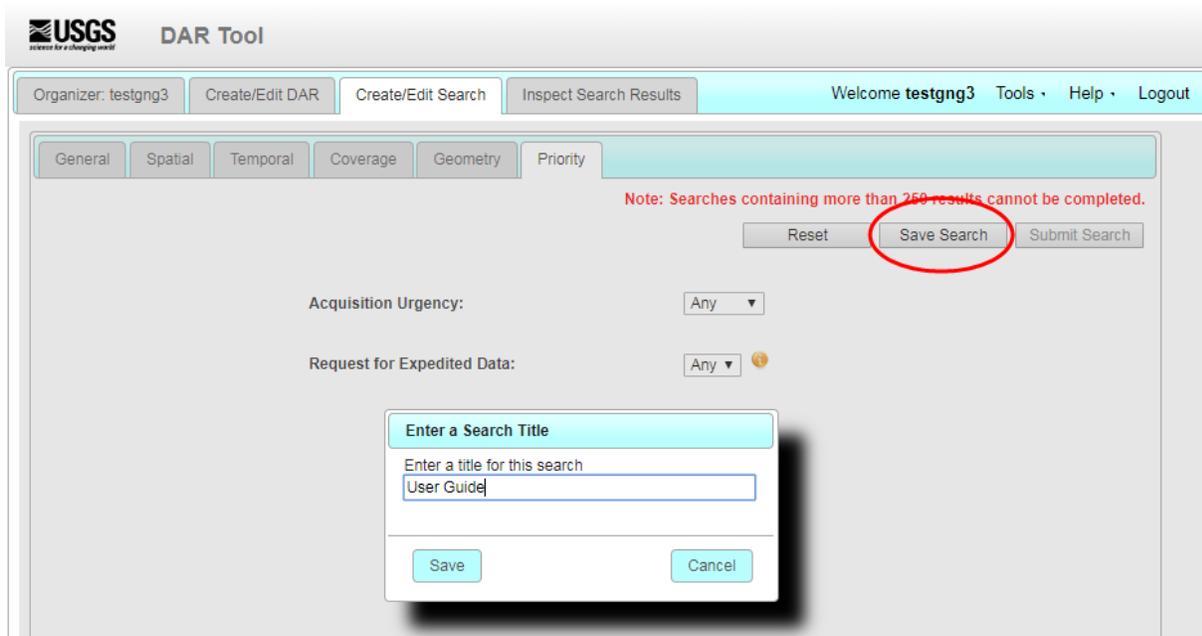
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Coverage, Geometry, and Priority tabs:

Users are advised to use the default settings on these tabs. Contact [LP DAAC User Services](#) for further details should you desire to use this function.

Save and Submit Search:

1. Click the “Save Search” button. A dialog window will request you to enter a title for your search and click “Save”. If logged in as a “GUEST”, please enter an email address to be notified when the search results are available (An e-mail notification from LP DAAC will reference the search title that you are to enter in the “Inspect Search Results” tab).



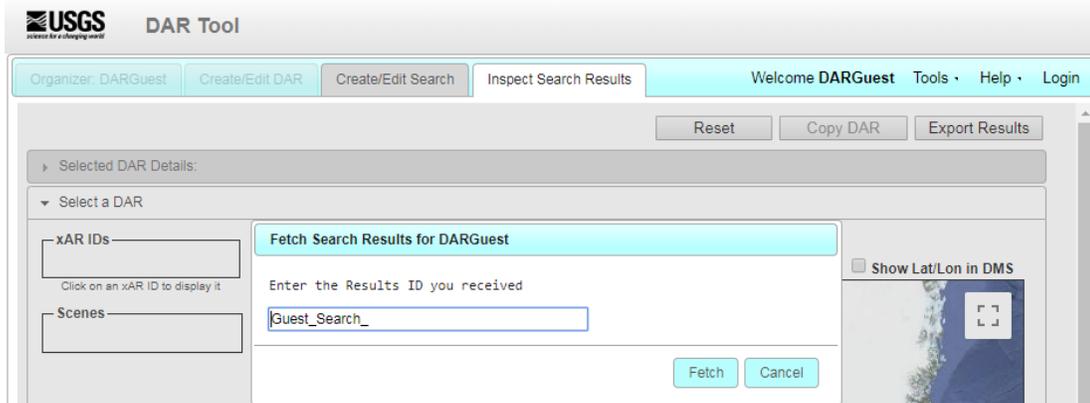
1. Click on the “Submit Search” button. Non-Guest users do not need to enter an e-mail address and will be sent an e-mail with the notification of the results of your search. Click “OK” to close window. Now your search has been submitted to GDS Japan. You will be notified by email as to the results of the search.

Inspect Search Results

Review returned results of acquired data.

1. If your search was submitted as a registered user, log in to the DAR Tool, and locate the search title under the “Organizer” tab. (If the search was submitted as a “GUEST”, follow the instruction that was emailed with subject titled: LPDAAC: DAR Tool Search Results. The search results will be available if the user remembers how to access them).

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2. Click on the radio button next to the titled search you entered and click the “Load Selected Session” button.
3. Results will be returned in the “Inspect Search Results” tab. These results are for information only; it is not editable. To display the results on to a spreadsheet, click the “Export Results” button.
4. Click on the selected title bar to view the DAR summary or the xAR ID on the map.
5. To display the xAR ID on the map, click on a xAR ID.

References

ASTER JPL Web site

<https://asterweb.jpl.nasa.gov/NewReq.asp>

ASTER SWIR User Advisory Document

https://lpdaac.usgs.gov/documents/217/ASTER_SWIR_User_Advisory_July_18_08.pdf

ASTER Overpass Predictor

https://lpdaacaster.cr.usgs.gov/estimator/reference_info.php

LP DAAC User Services

<https://lpdaac.usgs.gov/lpdaac-contact-us/>